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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Harri Okkonen

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EXAMINER

CHOW, CHIH CHING

ART UNIT

PAPER NUMBER

2191

DATE MAILED: 10/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/807,694	OKKONEN ET AL.	
	Examiner	Art Unit	
	Chih-Ching Chow	2191	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10-23 and 25-39 is/are rejected.
- 7) ☐ Claim(s) 9, 24 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. <u>10/10/06</u> |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/24/04, 7/20/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to amendment dated July 14, 2006.
2. Per Applicants' request, a Terminal disclaimer for U.S. Patent Application 10/788,768 is submitted to obviate the double patenting rejection.
3. Claims 1-39 remain pending.

Response to Amendment

4. The Double Patenting rejection to the copending application S.N. 10/788,768 is withdrawn in reviewing the Terminal disclaimer that was submitted on 8/2/2006.

Response to Arguments

5. Applicant's arguments, see REMARKS pp. 11, filed on July 14, 2006, with respect to Rao reference is disqualified as prior art under 35 USC § 103 (a) rejections, have been fully considered and are persuasive. The rejections of these claims under 35 USC § 103 (a) have been withdrawn. However, claims 1-39 are not in condition for allowance for the reasons listed hereinafter.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-7, 10-22, 25-39 are rejected under 35 U.S.C. 103(a) as being obvious over US 2004/0031029 by Lee et al., hereinafter "Lee", in view of US Patent No. 6,915,325 by Lee, Cheng-Yin et al., hereinafter "Lee CY".

CLAIM

1. An electronic device network, the network comprising:
a plurality of servers; and
a plurality of electronic devices communicatively coupled to at least one of the plurality of servers, each of the electronic devices being adapted to employ at least one of a plurality of update agents resident in the electronic device, wherein the update agent employed is selected to correspond to a type of update information received by the electronic device from the at least one of the plurality of servers, wherein the selected update agent processes the received update information to modify a first version of one of software and firmware in the electronic device to a second version, and wherein the electronic device is also adapted to provision the plurality of update agents with parameters and data used to facilitate update operations in the electronic device.

Lee / Lee CY

Lee teaches a method for updating software on a plurality of networked devices. See Lee's paragraph 0009, "updating a plurality of software components disposed on a **plurality of networked devices**, the plurality of networked devices being interconnected if a computer network...the method further includes obtaining, using the **first local update agent** and the **first update parameters**, a **first update file** for **updating software in the first networked device**. Additionally, the method includes updating, using the first local update agent and the first update file, the software in the first networked device." And paragraph 0032, "Administrative console 104 is coupled via the network to a **plurality of networked devices** such as servers 106, 108, and 110." Lee teaches all aspects of claim 1, but he does not mention 'update agent is selected to correspond to a type of update information' specifically, however, Lee CY teaches it in an analogous prior art. In Lee CY's abstract, "A correspondent agent intercepts a Binding Update with a Router Alert and binds the address of the mobile node with a care of address for the mobile node provided in the Binding Update. The correspondent agent will thereafter intercept messages from its correspondent host destined for the mobile node and redirect them to the care of address thereby bypassing the home agent of the mobile node." And see Lee CY's Fig. 2 and description in column 4, lines 4-11, "By programming a correspondent agent 60 to recognize a Binding Update when a Router Alert is included, the correspondent agent 60 will intercept the Binding Update with Router Alert and take

steps to form a tunnel to the mobile node. The correspondent agent 60 terminates the Binding Update and does not forward it to the correspondent host 50 to which it was addressed.”

It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to supplement Lee’s disclosure of the updating software for networked devices by using selected update agent for a corresponding type of update taught by Lee CY, for the purpose of routing the update request to a corresponding update agent via formed tunnels for communication with the mobile node (Lee CY’s Abstract).

2. The network according to claim 1, wherein the electronic device comprises random access memory and non-volatile memory, wherein the non-volatile memory comprises a plurality of components, the plurality of components comprising at least one of the following: an update application loader, the plurality of update agents, firmware, an operating system (OS), and provisioned data, wherein the provisioned data comprises update agent provisioning information and a number assignment module.

For the feature of claim 1 see claim 1 rejection. For the rest of claim 2 feature see Lee’s paragraph 0001, “These networked devices include, for example, routers, hubs, servers, workstations, desktop computers, laptop computers, printers, storage devices, printers and/or other output devices, and the like (*all are electronic devices*). As is well known, each of the networked devices may include many different hardware components each of which may be furnished with software (such as system software, application software, firmware, driver, or the like)” Also see Lee CY’s Fig. 3, the Correspondent Agent contains provisioning information, such as ‘correspondent router’, ‘redirector router’. For other update application resources see Lee CY’s column 9, lines 13-40.

3. The network according to claim 1, wherein the network further comprises at least one of an update server, and a

See claim 1 and 2 rejections.

plurality of generators, wherein the generators are adapted to generate updates able to be processed by at least one provisioned update agent in the electronic device, and wherein the update server is adapted to store updates accessible by the plurality of servers.

4. The network according to claim 1, wherein the electronic device further comprises a provisioned data unit adapted to store information related to an end-user's electronic device subscription, and wherein the provisioned data unit may be programmed during number assignment module programming activity.

5. The network according to claim 4, wherein the number assignment module programming activity comprises at least one of over-the-air service provisioning (OTASP) activity and over-the-air parameter administration (OTAPA) activity.

6. The network according to claim 4, wherein the provisioned data unit is

For the feature of claim 1 see claim 1 rejection. For the rest of claim 4 feature see claim 1 and Lee's paragraph 00037, "Notification module 308 represents the module for collecting the status information and/or notification messages from the various components of the automatic software update system. The notification messages may be sent to administrator console 302 and/or may be employed to automatically trigger other steps." And description on paragraph 0039 (*programmed number assignment module for programming activity*).

Lee teaches all aspects of claim 5, but he does not mention 'over-the-air service' specifically, however, LeeCY's teaching is for updating mobile node devices, see LeeCY's Abstract, "Location update messages for a mobile node can be made interceptible by routers which form tunnels for communication with the mobile node." Also for over-the-air service provisioning activity are disclosed in LeeCY's column 7, lines 14-16, "method and Apparatus for Data Transmission in a Wireless Network, Ser. No. 09/602,270, filed Jun. 23, 2000" and column 9, lines 22-27.

For the feature of claim 4 see claim 4 rejection. For the rest of claim 6 see Lee's paragraph 0055, "In one embodiment, the

adapted to store at least one of update agent related provisioning information, a universal resource locator of a server used to retrieve updates, and a security key used to authenticate server messages.

update files(s) are stored on a shared storage device coupled to the network and are accessed by their path name(s), which may be received as part of the update parameters. In another embodiment, the update file(s) are accessed by their URL (Uniform Resource Locator), which may be received as part of the update parameters and downloaded using the HTTP protocol”

7. The network according to claim 4, wherein each of the plurality of update agents has a corresponding entry in the provisioned data unit.

For the feature of claim 4 see claim 4 rejection. For the rest of claim 7 see LeeCY’s column 5, lines 65-67, “Referring now to FIG. 4, a flow chart for handling Router Alert location update messages at correspondent agents 60 is shown. A suitably programmed router 64 will intercept messages which contain a Router Alert Option.”

10. The network according to claim 1 wherein the electronic device is adapted to invoke an update agent based upon an update currently being processed provided that the update agent is provisioned in the electronic device.

See claim 1 rejection.

11. The network according to claim 1, wherein the electronic device may execute an update application loader on reboot, and wherein the update application loader is adapted to invoke a boot initialization code before determining to update the electronic device.

For the feature of claim 1 see claim 1 rejection. For the rest of claim 11 see Lee’s paragraph 0023, “The local update agent then obtains the update file, performs the installation as required (which may include rebooting the networked device after installation)”.

12. The network according to claim 1, further comprising update agent provisioning information stored in the electronic device, the update agent provisioning information comprising at least one of the following: a device server

For the feature of claim 1 see claim 1 rejection. For the rest of claim 12, see Lee paragraph 0055, “In one embodiment, the update files(s) are stored on a shared storage device coupled to the network and are accessed by their path name(s), which

URL, an index of provisioned update agents, a security key, and electronic device related information, wherein the device server URL provides references to servers hosting updates to be downloaded, and wherein the update are compatible with update agents currently available and provisioned in the electronic device.

may be received as part of the update parameters. In another embodiment, the update file(s) are accessed by their **URL (Uniform Resource Locator)**, which may be received as part of the update parameters and downloaded using the HTTP protocol.”

13. The network according to claim 12, wherein the index of provisioned update agents provides an index value used to compute an address location of a provisioned update agent, and wherein the index of provisioned update agents provides an index to a table containing an address for an update agent in non-volatile memory the electronic device.

For the feature of claim 12 see claim 12 rejection. For the rest of claim 13, see claim 7 rejection.

14. The network according to claim 12, wherein the security key is used to authenticate updates during download of updates and during update activity, wherein a separate security key is employed to authenticate updates by a download agent and by the update agent, and wherein the security key is employed for at least one of the following: secure communication, encryption, and decryption of data and messages during communication with external systems.

For the feature of claim 12 see claim 12 rejection. For the rest feature of claim 14 see claim 6 rejection.

15. The network according to claim 1, wherein the electronic device further comprises an update agent table resident in non-volatile memory, the update agent table containing references to a plurality of update agents currently available and provisioned in the electronic device, the update agent table associating update agent names, update agent address locations,

For the feature of claim 1 see claim 1 rejection. For the rest feature of claim 15 see claim 7 rejection.

types of updates that the update agents are adapted to process, and provisioning status of the update agents for all available update agents in the electronic device.

16. The network according to claim 1, wherein the electronic device comprises at least one of a plurality of mobile electronic devices, and wherein the plurality of mobile electronic devices comprise at least one of the following: a mobile cellular phone handset, a personal digital assistant, a pager, an MP3 player, and a digital camera.

For the feature of claim 1 see claim 1 rejection. For the rest feature of claim 16 see claim 5 rejection.

17. A method employing a plurality of update agents in an electronic device in an electronic device network, the method comprising:

Lee and LeeCY's disclosures definitely employs a 'method' which does all the features in recited in claim 17. See claim 1 rejection.

- communicatively coupling a plurality of electronic devices to at least one of a plurality of servers;

- selecting at least one of a plurality of update agents resident in the electronic device to modify a first version of one of software and firmware in the electronic device to produce an updated version, wherein each of the plurality of update agents is arranged to process a corresponding type of update information received from the at least one of a plurality of servers; and

- provisioning the plurality of update agents with parameters and data used to facilitate update operations in the electronic device.

18. The method according to claim 17, further comprising generating updates able to be processed by at least one provisioned update agent in the electronic device and storing updates in an update server.

For the feature of claim 17 see claim 17 rejection. For the rest of claim 18 feature see claim 1 and claim 3 rejections.

19. The method according to claim 17, further comprising:
storing information related to an end-user's electronic device subscription; and
programming a provisioned data unit during number assignment module programming activity.

For the feature of claim 17 see claim 17 rejection. For the rest of claim 19 feature see claim 4 rejection.

20. The method according to claim 19, wherein the number assignment module programming activity comprises at least one of the following: over-the-air service provisioning (OTASP) activity and over-the-air parameter administration (OTAPA) activity.

For the feature of claim 17 see claim 17 rejection. For the rest of claim 20 feature see claim 5 rejection.

21. The method according to claim 19, wherein the programming further comprises storing update agent related provisioning information, a universal resource locator of a server used to retrieve updates, and a security key used to authenticate server messages.

For the feature of claim 19 see claim 19 rejection. For the rest of claim 21 feature see claim 6 rejection.

22. The method according to claim 19, further comprising providing each update agent an entry in a provisioned data unit.

For the feature of claim 19 see claim 19 rejection. For the rest of claim 22 feature see claim 7 rejection.

25. The method according to claim 17, further comprising invoking an update agent based upon an update currently being processed provided that the update agent is provisioned in the electronic device.

For the feature of claim 17 see claim 17 rejection. For the rest of claim 25 feature see claim 10 rejection.

26. The method according to claim 17, further comprising executing an update application loader on reboot of the electronic device and invoking a boot initialization code before determining to

For the feature of claim 17 see claim 17 rejection. For the rest of claim 26 feature see claim 11 rejection.

update the electronic device.

27. The method according to claim 17, further comprising:

- storing update agent provisioning information in the electronic device; and
- hosting updates to be downloaded with update agents provisioned in the electronic device.

For the feature of claim 17 see claim 17 rejection. For the rest of claim 27 feature see claim 1 rejection.

28. The method according to claim 17, further comprising determining an address location of a provisioned update agent, wherein determining comprises one of computing and accessing an entry in a table.

For the feature of claim 17 see claim 17 rejection. For the rest feature of claim 28, generating updates provided from plurality of agents (addresses) in particular, see LeeCY's Fig. 3, and description in LeeCY's column 5, lines 24-63.

29. The method according to claim 17, further comprising:

- authenticating updates during download of the updates and during update activity, using a security key;
- employing a separate security key to authenticate updates by a download agent and by the at least one of a plurality of update agents; and
- employing the security key for at least one of the following: secure communication, encryption, and decryption of data and messages, during communication with external systems.

For the feature of claim 17 see claim 17 rejection. For the rest of claim 29 feature see claim 6 rejection.

30. The method according to claim 17, further comprising mapping at least one of update agent names, update agent address locations, types of updates that the update agents are adapted to process, and provisioning status of the update agents for all available update agents in the electronic device.

For the feature of claim 17 see claim 17 rejection. For the rest of claim 30 feature see claim 15 rejection.

31. The method according to claim 17, wherein the electronic device comprises at least one of the following: a plurality of mobile electronic devices, and wherein the plurality of mobile electronic devices comprise at least one of a mobile cellular phone handset, a personal digital assistant, a pager, an MP3 player, and a digital camera.

For the feature of claim 17 see claim 17 rejection. For the rest of claim 31 feature see claim 16 rejection.

32. (New) An electronic device operable in an electronic device network, the electronic device comprising:

Both Lee and LeeCY's disclosures teach the features of claim 32, see claims 1, 2, and 3 rejections.

- non-volatile memory comprising a first version of code;

- communication circuitry for receiving, from at least one server in the electronic device network, update information having an associated type;

- code resident in and executable by the electronic device, the code comprising a plurality of update agents selectable to cause processing of a corresponding type of received update information, to update a related code portion of the first version of code to an updated version;

- wherein the processing modifies the related code portion of the first version of code to produce the updated version; and

- wherein an update agent is selected to perform an update based upon the type of the received update information.

33. The electronic device according to claim 32 wherein the communication circuitry comprises a cellular network interface.

For the feature of claim 32 see claim 32 rejection. For the rest of claim 33 feature see claim 5 rejection.

34. The electronic device according to claim 32 wherein the update information comprises an update package.

For the feature of claim 32 see claim 32 rejection. For the rest of claim 34 feature see claim 7 rejection, where update agent is

35. The electronic device according to claim 32 wherein a portion of the non-volatile memory comprises provisioned data received from at least one of the plurality of servers.

the same as update package.

For the feature of claim 32 see claim 32 rejection. For the rest of claim 35 feature see claims 1, 2 and 7 rejections.

36. The electronic device according to claim 35 wherein the provisioned data comprises at least one entry corresponding to one of the plurality of update agents.

For the feature of claim 32 see claim 32 rejection. For the rest of claim 36 feature see claim 7 rejection, where 'type of update agent' is the provisioned data.

37. The electronic device according to claim 35 wherein programming of provisioned data is performed during programming of information related to a wireless service subscription.

For the feature of claim 32 see claim 32 rejection. For the rest of claim 37 feature see claim 5 rejection.

38. (New) The electronic device according to claim 35 wherein provisioned data comprises a universal resource locator of a server on which a corresponding type of update information is stored.

For the feature of claim 35 see claim 35 rejection. For the rest of claim 37 feature see claim 12 rejection.

39. (New) The electronic device according to claim 35 wherein provisioned data comprises security information enabling update of the related code portion.

For the feature of claim 35 see claim 35 rejection. For the rest of claim 37 feature see claims 6 and 28 rejections.

8. Claims 8 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 2004/0031029 by Lee et al., hereinafter "Lee", in view of US Patent No. 6,915,325 by Lee, Cheng-Yin et al., hereinafter "Lee CY", further in view of US Patent No. 5,708,776 by Dan Kikinis (hereinafter "Kikinis").

CLAIM

8. The network according to claim 1, wherein one of the plurality of update agents is designated a primary update agent and another of the plurality of update

Lee/ LeeCY / Kikinis

For the feature of claim 1 see claim 1 rejection. Lee and LeeCY teach all aspects of claim 8, but he does not mention 'Primary update agent and secondary

agents is designated as a secondary update agent, and wherein the primary update agent is used to perform updates during one of power up and reboot of the electronic device and the secondary update agent is used to perform updates not requiring electronic device rebooting.

update agent' specifically, however, Kikinis teaches it in an analogous prior art. All of their disclosures are for updating agents cross network and reboot of an electronic device. See Kikinis' title, "Automatic recovery for network appliances" in particular, see Kikinis column 1, lines 53-59, "a **primary boot partition** on the mass storage device, comprising primary operating software and primary application software for execution by the CPU in **booting** the network appliance and placing it in operation performing its application; a **secondary boot partition** on the mass storage device, comprising secondary operating software and secondary application software; and an automatic recovery routine on the non-volatile storage device."

It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to supplement Lee and Rao's disclosures of the updating software for networked devices by using Primary Update/Secondary Update (while there are plurality of update agents) taught by Kikinis, for the purpose of initiating necessary reboot (Kikinis Abstract, line 3).

23. The method according to claim 17, further comprising:

- designating a primary update agent and a secondary update agent;

- using the primary update agent to perform updates during one of the following: power up and reboot of the electronic device; and

- using the secondary update agent to perform updates not requiring electronic device rebooting.

For the feature of claim 17 see claim 17 rejection. For the rest of claim 19 feature see claim 8 rejection.

Allowable Subject Matter

9. Claims 9, 24 are objected to as being dependent upon a rejected base claim. The limitation recited in claims 9, 24 when taken individually is not deemed allowable. However, claims 9, 24 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Meyerson, US 6,976,251, discloses a method of updating computer software includes downloading software update information through a network, such as the Internet, to a user's computer. The download is preferably done periodically and automatically. If available, a criticality check program identified in the software update information is then automatically downloaded and executed to determine the configuration of the user's computer. The criticality and applicability of available software updates are evaluated by the criticality check program in light of the specific software and/or hardware configuration of the user's computer.

Ogawa, US 2002/0138567 A1, discloses an update client sends to an update server which is connected to the update client via a communication line, identification information of a driver and firmware which are included in a disk array system, and identification information of an error event which has occurred in the disk array system.

11. The following summarizes the status of the claims:

35 USC § 103 rejection: Claims 1-8, 10-23, 25-39

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chih-Ching Chow whose telephone number is 571-272-3693. The examiner can normally be reached on 7:30am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wei Zhen can be reached on 571-272-3708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Any inquiry of a general nature of relating to the status of this application should be directed to the TC2100 Group receptionist: 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chih-Ching Chow
Examiner
Art Unit 2191
October 14, 2006

CC



WEI ZHEN
SUPERVISORY PATENT EXAMINER